

Claims

1. An electric motor, having a stator (11) and a rotor (12) that is rotatable in the stator (11) and that has a rotor shaft (13), received rotatably in rotor bearings (14, 15), and having an effective decoupling for reducing the emission of airborne and structure-borne sound between the stator (11) and the rotor bearings (14, 15), characterized in that the rotor bearings (14, 15) are fixed on a housing (10) that surrounds and grips the stator (11), and that the decoupling is achieved by means of a spring-elastic suspension of the stator (11) from the housing (10).

2. The electric motor of claim 1, characterized in that for the spring-elastic suspension of the stator (11) from the housing (10), decoupling elements (28), at which the stator (11) is retained by nonpositive and/or positive engagement are secured to the inner wall (211) of a housing pot (21), spaced apart from one another in the circumferential direction.

3. The electric motor of claim 2, characterized in that at least three decoupling elements (48), offset from one another by the same angle of rotation, are provided, each extending over the entire axial length of the stator (11).

4. The electric motor of claim 2 or 3, characterized in that the decoupling elements (28) comprise an elastomer and, preferably by the two-component process, are jointly

injection-molded onto the plastic injection-molded housing (21).

5. The electric motor of one of claims 2-4, characterized in that the decoupling elements (28) have a C- shaped profile and protrude radially to the rotor shaft (13) away from the housing pot (21) with both legs (282, 283) of the C, which are joined together by a longitudinal rib (281), and that means for coupling the stator (11) by positive engagement are held up in each of the legs (282, 283) of the C.

6. The electric motor of claim 5, characterized in that the stator (11) has a pole tube (30) equipped with permanent magnet poles (29), and that on one leg (283) of the C of the decoupling elements (28), an annular-segment slot (31) is provided for positive-engagement insertion of one face end (301) of the pole tube (30), and on the other leg (282) of the C of the decoupling elements (28), a positive- engagement element cooperating with a positive-engagement element embodied on or in the jacket of the pole tube (30) is provided.

7. The electric motor of claim 6, characterized in that the two positive-engagement elements form a tongue (32) and groove (33) of a dovetail connection (34).

8. The electric motor of claim 7, characterized in that the groove (33) of the dovetail connection (34) is machined into

the jacket of the pole tube (30), and the tongue (32) of the dovetail connection (34) protrudes from the free end face, oriented toward the pole tube (30), of the leg (282) of the C of the decoupling elements (28).

9. The electric motor of one of claims 2-8, characterized in that the housing pot (21) is closable with a housing cap (22) that carries a fastening flange (26), and that the rotor bearings (14, 15) are disposed in the pot bottom (23) of the housing pot (21) and in the housing cap (22), respectively.

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